

Please type a plus sign (+) inside this box

APR 29 2004

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

Complete if Known

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

of

5

Application Number	10/623,092
Filing Date	July 18, 2003
First Named Inventor	Joseph W. Roos
Group Art Unit	1755
Examiner Name	Not Assigned

Attorney Docket Number

EI-7592

U.S. PATENT DOCUMENTS				CLASS	SUBCLASS		
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		Number	Kind Code ² (if known)				
<i>jm</i>		US 6,361,754 B1		Peter-Hoblyn et al.	3/26/2002	—	—
<i>jm</i>		US 6,200,358 B1		Fleischer et al.	3/13/2001	—	—
<i>jm</i>		US 6,193,767 B1		Arters et al.	2/27/2001	—	—
<i>jm</i>		6,152,972		Shustorovich et al.	11/28/2000	—	—
<i>jm</i>		6,056,792		Barr et al.	5/2/2000	—	—
<i>jm</i>		6,051,040		Peter-Hoblyn	4/18/2000	—	—
<i>jm</i>		6,023,928		Peter-Hoblyn et al.	2/15/2000	—	—
<i>jm</i>		6,003,303		Peter-Hoblyn et al.	12/21/1999	—	—
<i>jm</i>		5,976,475		Peter-Hoblyn et al.	11/2/1999	—	—
<i>jm</i>		5,953,906		Gamel et al.	9/21/1999	—	—
<i>jm</i>		5,944,858		Wallace	8/31/1999	—	—
<i>jm</i>		5,928,392		Aradi	7/27/1999	—	—
<i>jm</i>		5,924,280		Tarabulski	7/20/1999	—	—
<i>jm</i>		5,919,276		Jeffrey	7/6/1999	—	—
<i>jm</i>		5,912,190		Barr et al.	6/15/1999	—	—
<i>jm</i>		5,819,529		Peter-Hoblyn	10/13/1998	—	—
<i>jm</i>		5,813,224		Rao et al.	9/29/1998	—	—
<i>jm</i>		5,809,775		Tarabulski et al.	9/22/1998	—	—
<i>jm</i>		5,809,774		Peter-Hoblyn et al.	9/22/1998	—	—
<i>jm</i>		5,758,496		Rao et al.	6/2/1998	—	—

FOREIGN PATENT DOCUMENTS					CLASS	SUBCLASS		
Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
		EP	0 466 512	B1	Leeper	06/29/1994	—	—
<i>jm</i>		EP	0 507 510	A1	Hollrah et al	10/07/1992	—	—
<i>jm</i>		EP	0 667 387	A2	Perry et al	08/16/1995	—	—
<i>jm</i>		EP	0 668 899	B1	Peter-Hoblyn et al	09/20/2000	—	—

Examiner Signature

Paul M. H.

Date Considered

3/29/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		Complete if Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/623,092		
(use as many sheets as necessary)		Filing Date	July 18, 2003		
Sheet 2 of 5		First Named Inventor	Joseph W. Roos		
		Group Art Unit	1755		
		Examiner Name	Not Assigned		
		Attorney Docket Number	EI-7592		

U.S. PATENT DOCUMENTS					CLASS	SUBCLASS
Examiner Initials	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages of Relevant Document Appear
		Number	Kind Code ² (if known)			
		5,732,548		Peter-Hoblyn	3/31/1998	—
		5,679,116		Cunningham et al.	10/21/1997	—
		5,599,357		Leeper	2/4/1997	—
		5,584,894		Peter-Hoblyn et al.	12/17/1996	—
		5,551,957		Cunningham et al.	9/3/1996	—
		5,501,714		Valentine et al.	3/26/1996	—
		5,376,154		Daly et al.	12/27/1994	—
		5,340,369		Koch et al.	8/23/1994	—
		5,113,803		Hollran et al.	5/19/1992	—
		5,034,020		Epperly et al.	7/23/1991	—
		4,955,331		Hohr et al.	9/11/1990	—
		4,946,609		Pruess et al.	8/7/1990	—
		4,908,045		Farrar	3/13/1990	—
		4,891,050		Bowers et al.	1/2/1990	—
		4,804,388		Kukin	2/14/1989	—
		4,674,447		Davis	6/23/1987	—
		4,670,020		Rao	6/2/1987	—
		4,664,677		Dorer, Jr. et al.	5/12/1987	—
		4,588,416		Zaweski et al.	5/13/1986	—
		4,568,357		Simon	2/4/1986	—

FOREIGN PATENT DOCUMENTS					CLASS	SUBCLASS		
Examiner Initials ⁴	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages of Relevant Document Appear	T ₆
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
		EP	1 968 444	A1	Roos et al.	12-10-2003	—	
		WO	02/48293	A1	Roos et al.	06-20-2002	—	

Examiner Signature		Date Considered
--------------------	--	-----------------

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

Approved for use through 10/31/2022. GPO:2021-093.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 5

Complete if Known

Application Number 10/623,092

Filing Date July 18, 2003

First Named Inventor **Joseph W. Roos**

Group Art Unit 1755

Examiner Name: Not Assigned

Attorney Docket Number

CLASS

513 (415)

FOREIGN PATENT DOCUMENTS

**Examiner
Signature**

Bradford

Date Considered

3/29/05

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark

Please type a plus sign (+) inside this box →

PTO/SB/08A (08-00)

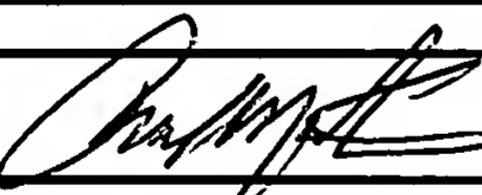
Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/623,092
(use as many sheets as necessary)		Filing Date	July 18, 2003
Sheet 4 of 5		First Named Inventor	Joseph W. Roos
		Group Art Unit	1755
		Examiner Name	Not Assigned
		Attorney Docket Number	EI-7592

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JW		Faix, Louis J.; A study of the Effects of Manganese Fuel Additive on Automotive Emissions; SAE [Tech. Pap.], 780002, pp. 1-12 <i>(NO DATE AVAILABLE)</i>	
JM		Fekete, Nicholas; Gruden, Igor; Voigtlander, Dirk; Nester, Ulrich; Krutzsch, Bernd; Willand, Jurgen; and Kuhn, Michael; Advanced Engine Control and Exhaust Gas Aftertreatment of a Leanburn SI Engine; SAE [Tech. Pap.] 972873; pp. 1-10 <i>(NO DATE AVAILABLE)</i>	
JM		Valentine, James M.; Clean Diesel Technologies Inc. Announces Test Results of Platinum/Cerium Diesel Fuel Additive; 203/327-7050, article in Diesel/Net News; 9/20/2002, pp. 1-2.	
JM		Eastwood, Peter; Critical Topics in Exhaust Gas Aftertreatment; Research Studies Press Ltd. (2000), pp. 215-218	
JM		Lenane, D. L.; Effect of MMT on Emissions from Production Cars; SAE [Tech. Pap.], 780003, pp. 1-20 <i>(1978)</i>	
JM		Lenane, D. L.; Effect of a Fuel Additive on Emission Control Systems; sae [Tech. Pap.] 902097, pp. 1-17 <i>(October 1990)</i>	1990
JM		Farrauto, Robert J.; Mooney, John J.; Effects of Sulfur on Performance of Catalytic Aftertreatment Devices; SAE [Tech. Pap.] 920557, pp. 1-7 <i>(February 1992)</i>	
JM		Jelles, S.J.; Makkee, M.; Moulijn, J.A.; Acres, G.J.K.; and Peter-Hoblyn, J.D., Diesel Particulate Control. Application of an Activated Particulate Trap in Combination with Fuel Additives at an Ultra Low Dose Rate; SAE [Tech. Pap.], 1999-01-0113, pp. 1-6 <i>(March 1999)</i>	
JM		Eolys™ Fuel-Borne Catalyst for Diesel Particulates Abatement: A Key Component of an Integrated System. DieselNet Technical Report, Sept. 1999, pp.1-9. <i>(September 1999)</i>	
JM		Guyon, M.; Blejean, F.; Bert, C.; LeFaou, PH.; Impact of Sulfur on Nox Trap Catalyst Activity-Study of the Regeneration Conditions; SAE [Tech. Pap.] 982607, pp. 87-95 <i>(October 1998)</i>	

Examiner Signature		Date Considered	3/29/05
--------------------	--	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box →

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	10/623,092
(use as many sheets as necessary)				Filing Date	July 18, 2003
Sheet	5	of	5	First Named Inventor	Joseph W. Roos
				Group Art Unit	1755
				Examiner Name	Not Assigned
				Attorney Docket Number	EI-7592

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
<i>JR</i>		Arakawa, Kenji; Matsuda, Satoshi; and Kinoshita, Hiroo; Progress in Sulfur Poisoning Resistance of Lean NO _x Catalysts; SAE [Tech Pap.] 980930, pp. 111-118 <i>(February 1998)</i>		T ²
<i>JR</i>		Dearth, Mark A.; Hepburn, Jeffrey S.; Thanasiu, Eva; McKenzie, JoAnne; Home, Scott G.; Sulfur Interaction with Lean NO _x Traps: Laboratory and Engine Dynamometer Studies; SAE [Tech. Pap.] 982595, (1998) pp. 1-9 <i>(October 1998)</i>		
<i>JR</i>		Aradi, Allen A.; Roos, Joseph W.; Fort, Jr., Ben F.; Lee, Thomas E.; and Davidson, Robert I.; The Physical and Chemical Effect of Manganese Oxides on Automobile Catalytic Converters; SAE [Tech. Pap.] 940747, pp. 207-218 <i>(February 28 - March 3 1994)</i>		
<i>JR</i>		Bailie, J. D.; Michalski, G. W.; Unzelman, G. H., MMT-A Versatile Antiknock; Natl. Pet. Refiners Assoc., [Tech. Pap.], AM-78-36, pp. 1-20 <i>(1978)</i>		
<i>JR</i>		Valentine, James M.; Peter-Hoblyn, Jeremy D.; and Acres, G.K., Emissions Reduction and Improved Fuel Economy Performance from a Bimetallic Platinum/Cerium Diesel Fuel Additive at Ultra-Low Dose Rates; SAE [Tech. Pap.], 2000-01-1934, pp. 1-9 <i>(June 2000)</i>		
<i>JR</i>		Guinther, Greg H.; Human, David M.; Miller, Keith T.; Roos, Joseph W.; and Schwab, Scott D.; The Role that Methylcyclopentadienyl Manganese Tricarbonyl (MMT®) Can Play in Improving Low-Temperature Performance of Diesel Particulate Traps; SAE [Tech. Pap.], 2002-01-2728, pp. 1-9 <i>(October 2002)</i>		
<i>JR</i>		Nelson, A.J.; Ferreira, J.L.; Reynolds, J.G.; Schwab, S.D.; and Roos, J.W.; X-Ray Absorption Characterization of Diesel Exhaust Particulates; Article in Materials Research Society Symposium Proceedings, Vol. 590, 2000, pp. 63-69 <i>(2000)</i>		
<i>JR</i>		Stultz, S.C., Kitto, J.B., Editors; "NO _x Formation conditions"; Babcock & Wilcox, a McDermott Company: Steam, its generation and use. 40th ed., p. 34-4 to 34-9. (1992)		
<i>JR</i>		MILLER, R. et al., "A Super-Extended Zel'dovich Mechanism for NO _x modeling and Engine Calibration," SAE Technical Paper 980781, (1998) <i>February 1998</i>		

Examiner Signature	<i>Paul M. Roos</i>	Date Considered	<i>3/29/05</i>
--------------------	---------------------	-----------------	----------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
in a collection of information unless it contains a valid OMB control number.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number	10/623,092
Filing Date	July 18, 2003
First Named Inventor	Joseph W. ROOS et al.
Art Unit	Not assigned; Conf. No.: 2887
Examiner Name	Not assigned
Attorney Docket Number	AC-7592

FOREIGN PATENT DOCUMENTS					CLASS	SUBCLASS
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Page _____ Lines _____ Where relevant Passages Or References _____ appear	T ⁶
<i>GM</i>		EP 0 268 353 A1	05-25-1988	DOYLE et al.	—	—
<i>GM</i>		EP 1 431 372 A2	06-23-2004	ARADI et al.	—	—
<i>GM</i>		EP 1 431 372 A3	10-27-2004	ARADI et al.	—	—

***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.